

Claims:

1. Process for enhancing the filling capacity of tobacco, such as cut tobacco leaf or tobacco midribs, or tobacco additional material, by treating the tobacco material having an initial moisture of 10-30% with a treatment gas consisting of nitrogen and/or argon at pressures of 400 to 1,000 bar followed by a continuous decompression and subsequent thermal post-treatment of the discharged tobacco material, **characterized in that** the filling density of the tobacco charge in the autoclave is greater than 0.2 kg/dm^3 .
2. Process according to Claim 1, **characterized in that** the pressure time, that is to say the time between the start of pressure buildup and decompression, is at least 300 sec.
3. Process according to Claims 1 and 2, **characterized in that** the tobacco is mechanically compressed before, during or after the pressure vessel is filled.
4. Process according to Claim 3, **characterized in that** the tobacco is heated before or during compression.
5. Process according to Claims 1-4, **characterized in that** the pressure time of at least 300 sec is reached after rapid pressure buildup by allowing the vessel to stand under pressure.
6. Process according to Claim 5, **characterized in that** after the vessel is allowed to stand, before the decompression, renewed pressurisation is performed.